ESDIS Traffic Requirements Status Review

April 14, 1999

Agenda

- Introductory Remarks
- Review Action Item List from November Review
- ESDIS Mission and Science Processing Requirements Overview
- Requirements Process Overview
- ESDIS Requirements Specification to NISN
- Summary

Introductory Remarks

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- Objectives
  - Review Action Item List from November Review
  - Review network traffic requirement changes since the last review
  - Review Requirements Process
  - Review ESDIS Detailed Requirements Specification to NISN
  - Receive ESDIS approval or comments on changes

Action Item List from November Review

Network Traffic Requirements Review

Action Item List from November Review

Item No.	Description	Actionee	Due Date	Response	Disposition
ESDIS RR - 1	Meet with Y. Lu to determine the latest ramp-up schedule for AM-1 and PM-1 for both mission and science data requirements.	Dan Nielsen (BAH) Jim Burris (BAH)	Dec. 31, 1998	Refer to CCR #53 and CCR #55	Closed
ESDIS RR - 2	Check with D. Filson regarding an ESDIS CCR to officially capture the EMOS requirement between EOC and Ratheyon, Denver	Clayton Sigman (ESDIS)	March 31, 1999	Currently ETRD CCR #46	Open
ESDIS RR – 3	Document deltas between the ETRD and the official ESDIS approved baseline. Evaluate the possibility of adding the official data back into the ETRD.	Dan Nielsen (BAH) Jim Burris (BAH)	April 15, 1999	In Progress	Open
ESDIS RR – 4	Change the start date of the Basic User Flow requirements to Launch minus 3 months.	Dan Nielsen (BAH)	Dec. 31, 1998	Changed to Launch minus 3 months, Completed on 12/16/98	Closed
ESDIS RR – 5	Validate all start/stop dates associated with the science data requirements and document all assumptions.	Dan Nielsen (BAH) Jim Burris (BAH)	March 31, 1999	Refer to CCR #57	Closed
ESDIS RR – 6	Validate all start/stop dates associated with mission and science data requirements. Eliminate all default 1/1/2020 stop dates.	Dan Nielsen (BAH) Jim Burris (BAH)	March 31, 1999	Refer to CCR #57	Closed
ESDIS RR – 7	Validate all routed data requirements for proper NISN level of service designation and document / confirm assumptions with G. Knoble.	Dan Nielsen (BAH) Jim Burris (BAH)	March 31, 1999	Refer to CCR #60	Closed

Network Traffic Requirements Review

Action Item List from November Review

Item No.	Description	Actionee	Due Date	Response	Disposition
ESDIS RR – 8	Identify the appropriate NISN personnel required to sign all EBnet related documents.	Jerry Zgonc (NISN) Jim Cameron (NISN) Trish Perrotto (BAH)	Dec. 31, 1998	In progress	Open
ESDIS RR – 9	Replace "DAAC" with "Network Access" to clarify the source for the Basic User requirements.	Dan Nielsen	Dec. 31, 1998	Completed 12/11/1998	Closed
ESDIS RR – 10	Validate that all ESDIS Traffic requirements have the appropriate overhead factors applied and are consistent with NISN.	Dan Nielsen (BAH) Jim Burris (BAH)	April 15, 1999	In progress	Open
ESDIS RR – 11	Format the ESDIS Traffic requirement summary tables and text.	Dan Nielsen (BAH) Jim Burris (BAH)	Dec. 31,1998	Completed on 12/16/98	Closed
ESDIS RR – 12	Post Requirements Review on the ESDIS home page.	Hallee Wachsmuth (BAH) Aisha Anwar (BAH)	Dec. 31, 1998	Posted on EBnet homepage on 1/5/99	Closed
ESDIS RR – 13	Deliver softcopies of ESDIS traffic summary tables to J. Zgonc.	Dan Nielsen (BAH)	Nov. 30, 1998	Email sent to J. Zgonc on 11/25/98.	Closed

ESDIS Mission and Science Processing Requirements Overview

Network Traffic Requirements Review

ESDIS Mission Requirements

- ESDIS Mission Requirements continue to remain relatively stable

- Incorporated nine additional CCR's since last review of November 24, 1998

ESDIS Mission Requirements

Implemented Changes Since 11/24/98:

- CCR #52 – Pre-Launch testing for PM-1. This CCR changed requirements associated with the start date of Integration and Testing for PM-1 at the TRW facility (Redondo Beach, CA.) from 12/1/99 to 9/1/99.
  - *CCR Implemented in NTRD: 1/4/99*
  - *CCR Approval by ESDIS: TBD*

- CCR #53 – Revised Inter-DAAC Ramp-Up Schedule. This CCR reflects the revised Ramp-Up Schedule for both the AM-1 and PM-1 missions.
  - *CCR Implemented in NTRD: 1/26/99*
  - *CCR Approval by ESDIS: TBD*

AM-1		PM-1	
5/97 - 3/99	25%	6/00 - 12/01	50%
3/99 - 7/00	50%	12/01 - 12/02	75%
7/00 - 7/01	75%	12/02 - 12/05	100%
7/01 - 7/04	100%		

Network Traffic Requirements Review

ESDIS Mission Requirements

Implemented Changes Since 11/24/98 (cont.):

- CCR #57 – Change in Mission Milestone Dates. This CCR updates the milestone dates for the following missions: ADEOS-II, AM-1,CHEM-1, EO-1, ICESat, Jason, LandSAT-7, Meteor Sage-III, PM-1 and QuikSCAT.
  - *CCR Implemented in NTRD: 3/29/99*
  - CCR Approval by ESDIS: TBD

- CCR #58 – Appendix D Update to include Change 13. This CCR captures updates to Appendix D to reflect the deletion of AM-1 CERES requirements from EDOS-GSFC to NOAA in both the pre-launch and routine operations timeframe.
  - *CCR Implemented in NTRD: 4/7/99*
  - CCR Approval by ESDIS: TBD

ESDIS Mission Requirements

Implemented Changes Since 11/24/98 (cont.):

- CCR #59 – Addition of ICESat pre-launch requirements. This CCR incorporates the low rate command and telemetry ICESat pre-launch requirements between the ICESat MOC and the Ball Aerospace facility, both in Boulder, CO.
  - *CCR Implemented in NTRD: 4/7/99*
  - CCR Approval by ESDIS: TBD

- CCR #60 – Update of QuikSCAT requirements. This CCR updates the QuikSCAT requirements to reflect that all flows to and from the QuikSCAT MOC in Boulder, CO be designated as Routed Data - Mission Critical instead of Routed Data - Premium.
  - *CCR Implemented in NTRD: 4/7/99*
  - CCR Approval by ESDIS: TBD

ESDIS Mission Requirements

Implemented Changes Since 11/24/98 (cont.):

- CCR #61 –Update of EPGN support for AM-1. This CCR changes the low-rate housekeeping and command requirements from the EPGN to GSFC to reflect contingency operations support from pre-launch until end of on-orbit operations.
  - *CCR Implemented in NTRD: 4/13/99*
  - CCR Approval by ESDIS: TBD

ESDIS Mission Requirements - Pending Changes

- Continue to monitor and update ICESat requirements
- Update ADEOS-II requirements; waiting on Network IRD to be finalized
- Update PM-1 requirements (minor changes)
- Update METEOR/SAGE-III requirements
- Continue to monitor the transition of low rate command and telemetry for AM-1, PM-1, etc. from serial clock and data to IP.
- Classification of AM-1 GSFC-ASTER GDS requirements as Real-time Mission Critical

Network Traffic Requirements Review

ESDIS Science Processing Requirements

- ESDIS Science User Requirements:
  - QA / SCF
  - IST
  - DAAC Outflow
  - Basic User

- Strategy for Science Processing Requirements is to continue with baseline implementation plan using NASA's Standard Routed Data Network, while investigating and implementing newer approaches in parallel, e.g. vBNS, Abilene.

ESDIS Science Processing Requirements

Implemented Changes Since 11/24/98:

- CCR #55 – Revised Ramp-Up Schedule for DAAC-SCF QA flows. This CCR incorporates the changes to the DAAC-SCF QA flows for the revised Ramp-Up Schedule for both the AM-1 and PM-1 missions.
  - *CCR Implemented in NTRD: 1/26/99*
  - *CCR Approval by ESDIS: TBD*

- CCR #56 – Addition of ACRIM Requirements. This CCR incorporates additional ACRIM requirements from the ACRIM IST to the LaRC DAAC.
  - *CCR Implemented in NTRD: 3/23/99*
  - CCR Approval by ESDIS: TBD

Network Traffic Requirements Review

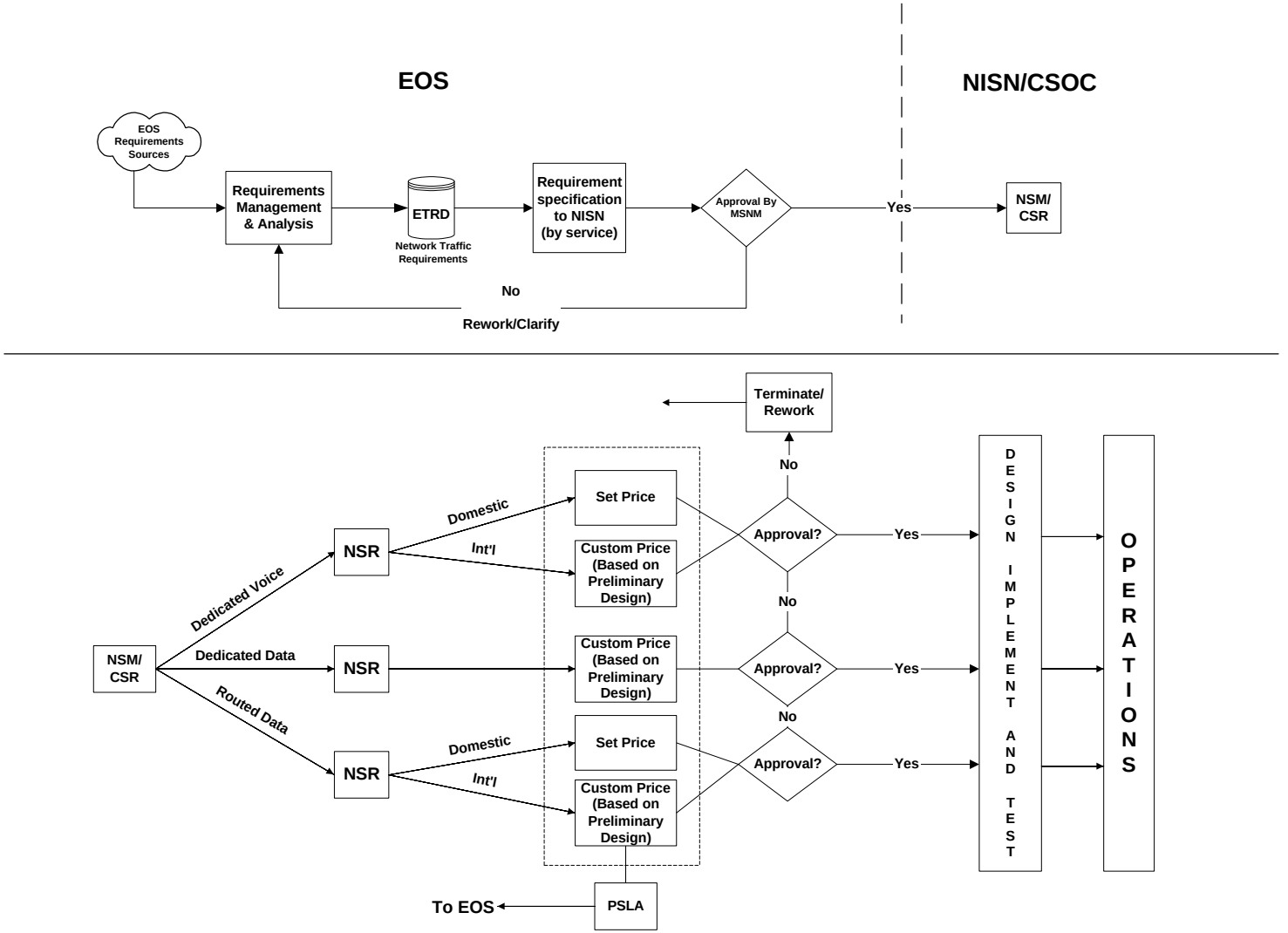
Science Processing Requirements - Pending Changes

- Extension of traffic requirements beyond the 2000 timeframe.
- Continue to monitor the transition of vBNS institutions to Abilene and other networks for transfer of science data.
- Conduct an analysis to trace requirements to the current network implementation.
- Ongoing refinement and documentation of assumptions.

Requirements Process

Network Traffic Requirements Review

Requirements Process Overview

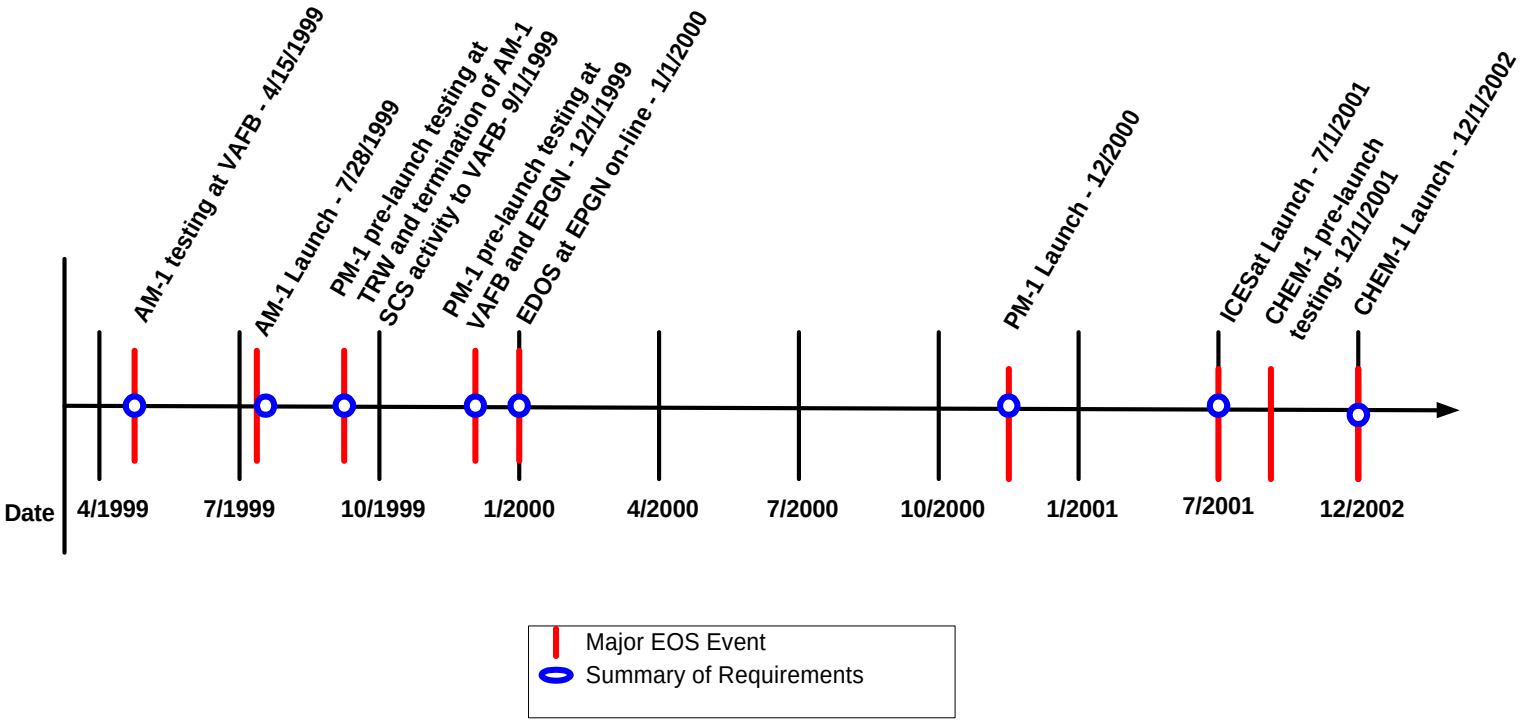


ESDIS Requirements Specification to NISN

- Dedicated Data
- Routed Data - Mission Critical
- Routed Data - Premium
- Routed Data - Standard

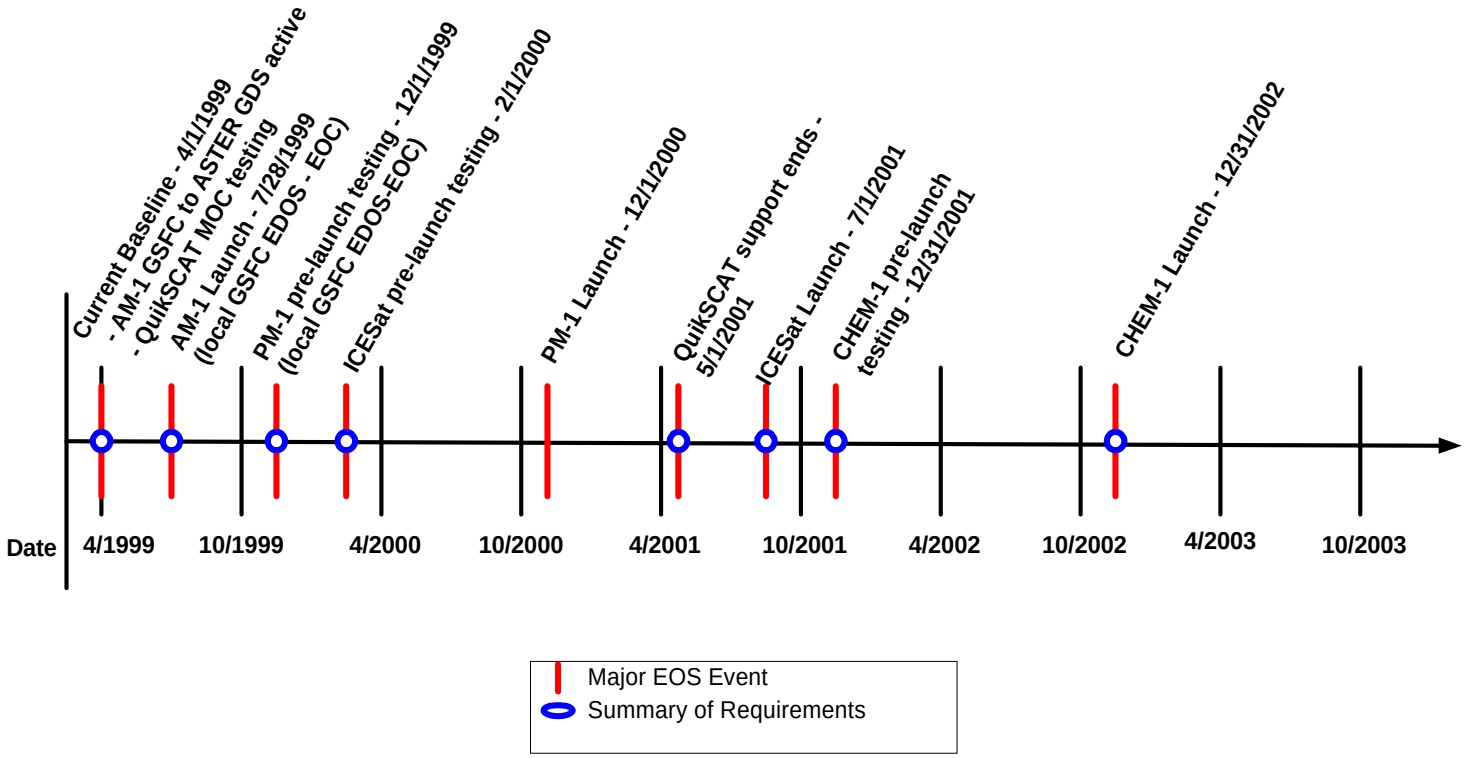
Network Traffic Requirements Review

EOS Event Timeline for Dedicated Data



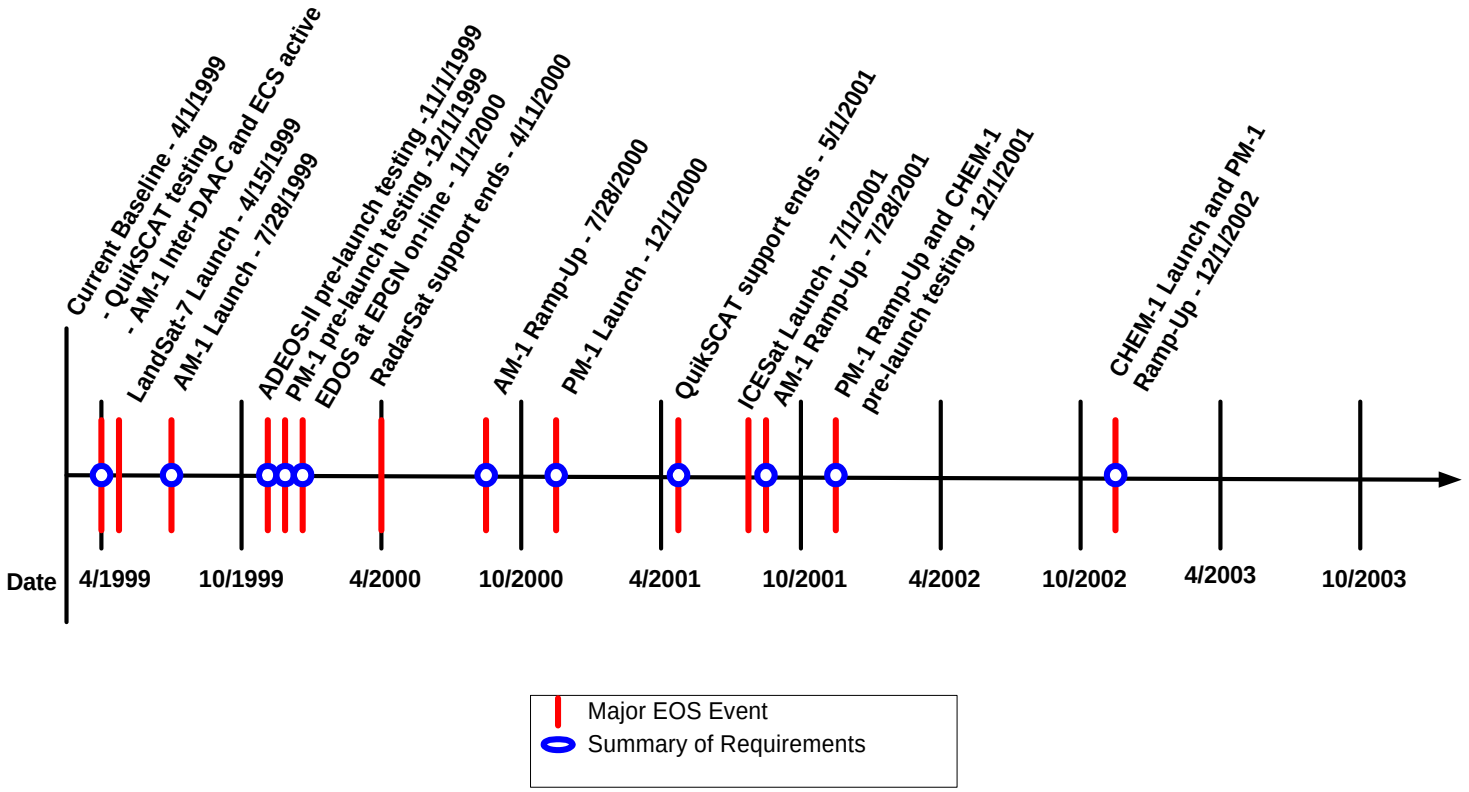
Network Traffic Requirements Review

EOS Event Timeline for Routed Data - Mission Critical



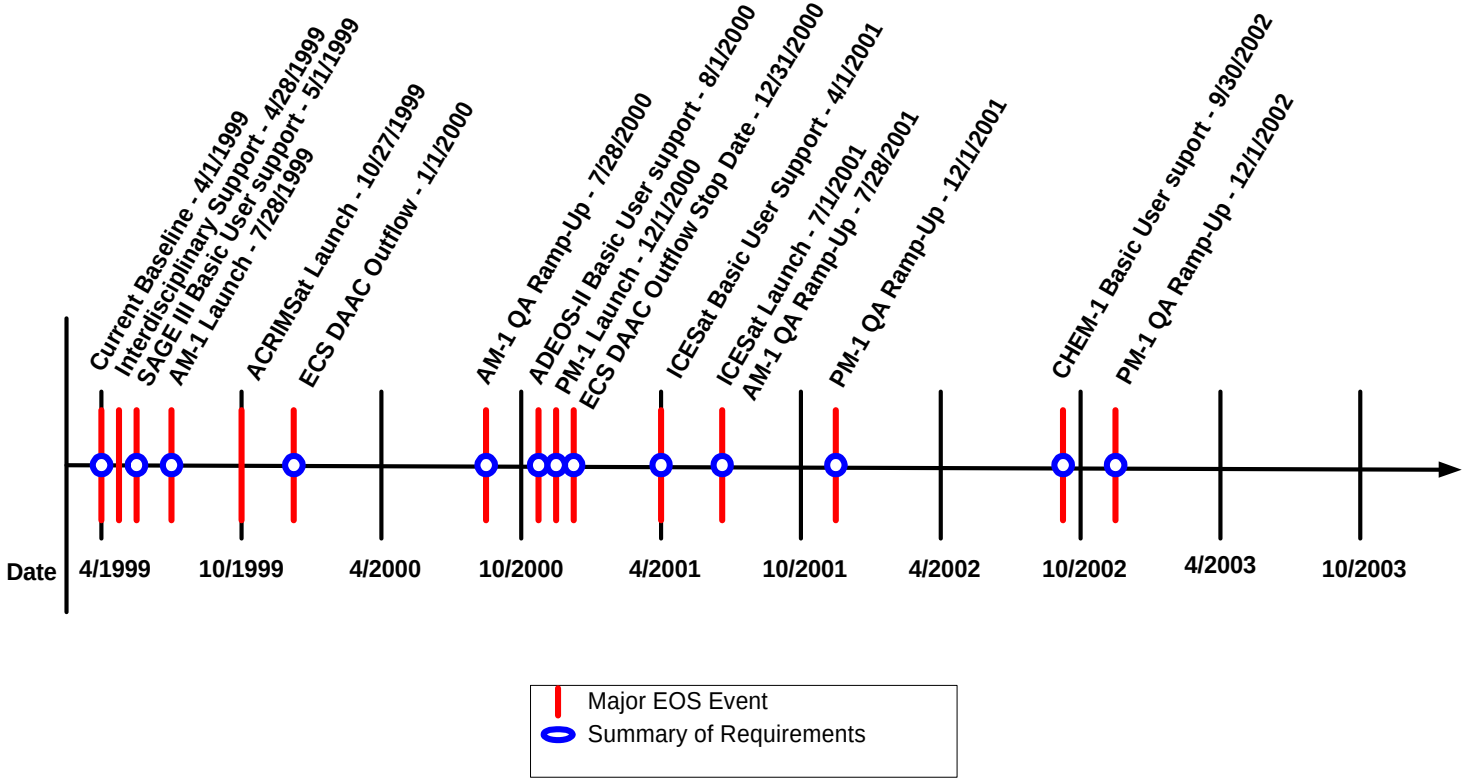
Network Traffic Requirements Review

EOS Event Timeline for Routed Data - Premium



Network Traffic Requirements Review

EOS Event Timeline for Routed Data - Standard



SUMMARY

- Continue to refine requirements specification format and process with NISN/CSOC
  - Overhead Factors
  - Tier 1 and Tier 2 level of detail required
- Work with ESDIS team members to evaluate and validate requirements
- Reconcile ETRD with the ESIDS official network requirements database
- Continue to respond and close action items